

REMARKS

Claims 13, 15-17, 24 and 28-32 are pending in the application after amendment.

The above amendment is provided to address indefiniteness found in claim 31. It is submitted that the claim now fully satisfies the requirements of Section 112. All of the claims are once more rejected under Section 102 based on Lau or under Section 103 based on a combination of Lau, Dardi and Khan. Applicants thank the Examiner for continued consideration of Applicants' comments regarding the patentability of the claims.

The Examiner is requested to consider removal of the rejections based on the following points. As previously urged, MPEP §2131 provides that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. The identical invention must be shown in as complete detail as contained in the claim. The elements must be arranged as required by the claim. Further, to reject a claim under Section 103 the prior art still must teach or suggest every element defined in the claim. There are two independent claims, 13 and 30, which are pending. It is now argued that none of the prior art alone or in combination can meet the terms of these independent claims and, therefore, the claims must be allowed.

As previously argued, claim 13 requires, among other features, that the structure of the claimed outer layer zone is entirely in the phase  $\beta$ -NiAl". There does not appear to be any disagreement with the Examiner that the claim language "the outer layer zone consisting of a structure of the phase  $\beta$ -NiAl" is so construed. On the other hand, a basis for applying the Lau reference in the rejections under both Section 102 and Section 103 appears to be that the Lau reference, at paragraph 24 therein, discloses the same identical structure. This is not supportable. Text at paragraph 24 of Lau states it is important that

"the secondary layer **comprise** a beta phase [and] it is preferable that the secondary layer further comprise an alpha-chrome phase. [Emphasis Added]"

In view of the above text and in the absence of any disclosure to the contrary, it cannot be concluded that Lau teaches or suggests applicants' claimed "outer layer zone consisting of a

structure of the phase  $\beta$ -NiAl ...” None of the prior art compensates for this deficiency. Accordingly, all of the rejections of claim 13 based on Lau are deficient.

The rejections based on Lau are also premised on a conclusion that “Lau also teaches the second layer is thinner than the first coating layer with a second layer thickness of 35-85 micrometers.” See page 3 of the outstanding office action which cites paragraph 10 of Lau for support of this contention. It is respectfully submitted that this conclusion is incorrect. A reading of paragraph 10 reveals that it is a diffusion region (between the primary layer and the secondary layer) which usually has a thickness of about 0.5% to about 10% of the total thickness of the primary layer and the secondary layer.

Another distinction over the prior art is that claim 13 (amended) now requires that the outer zone comprise 0.2wt% - 5wt% Re. The resulting combination is not found in the prior art.

Claim 24 is amended to expressly require that Ce is added to the outer layer zone in an amount of about 1 wt%. This further distinguishes over the prior art.

Claim 28 is amended to expressly require that the outer layer zone further comprise a concentration of Sc in the range of 0.01 and 1.0wt%.

For these and other reasons already made of record, claim 13, and each claim which depends there from, is distinct and non-obvious over the art of record. Allowance is therefore requested.

The Examiner is also requested to reconsider the rejection of independent claim 30 which requires an outer layer having the structure of a  $\gamma$ -Ni matrix and a concentration of Sc in the range of 0.01 and 1.0 wt%.

With respect to claim 31, which depends from claim 30, the claimed outer zone “has a thickness of between about 3 and 20 micrometers.” This feature is not found in the Lau reference. According to claim 32 the outer layer zone further comprises Ce substituted for Y in a concentration in the range of about 0.01 to 1 wt %. For these and other reasons already made of record, claim 30 and each claim which depends there from is distinct and non-obvious over the art of record.

Conclusion


In view of the above amendments and remarks, applicants respectfully submit that claims 13, 15-17, 24 and 28-32 are in condition for allowance and notice to that effect is respectfully requested.

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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